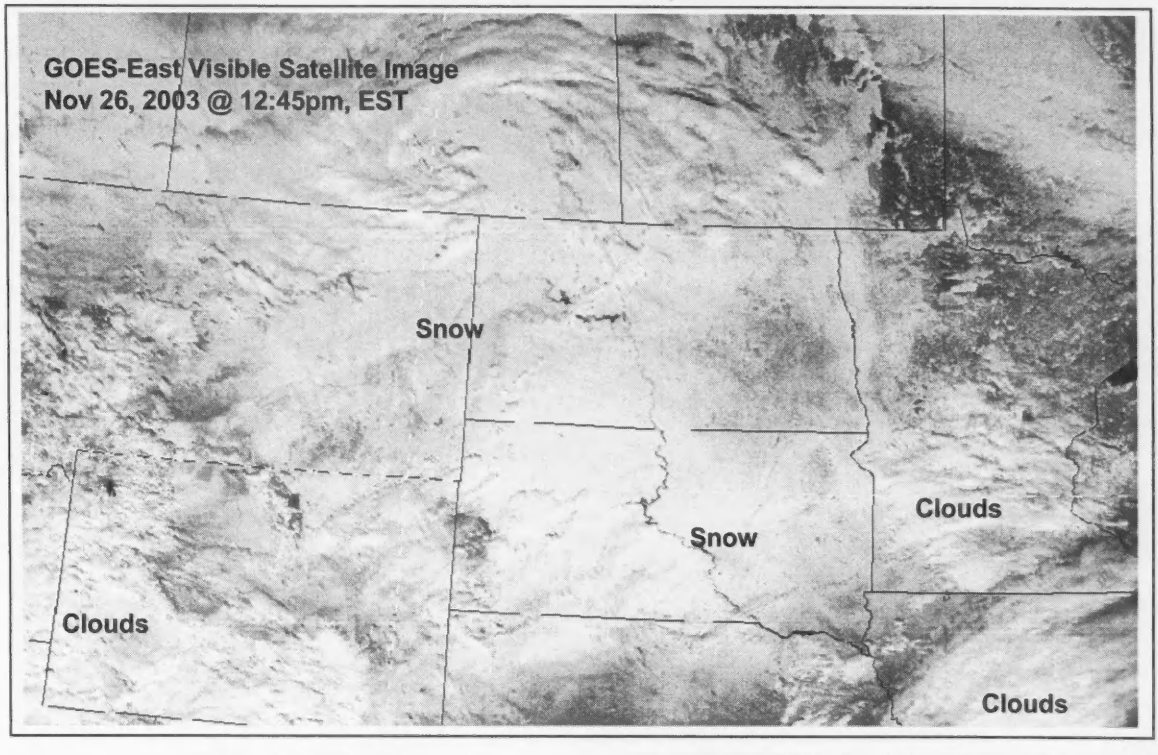
Volume 90, No. 48 http://www.usda.gov/oce/waob/jawf/wwcb.html December 2, 2003

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

November 23 - 29, 2003

Highlights provided by USDA/WAOB

For the second consecutive week, significant **Western** precipitation was largely confined to the **Northwest**, maintaining wet conditions in **western Washington** but aiding **Northwestern** winter grains and boosting high-elevation snow packs from the **Cascades to the northern Rockies**. Cool, mostly dry weather persisted elsewhere in the **West**, including drought-affected areas of the **Great Basin**, **Southwest**, and **central and southern Rockies**. Unfavorably dry weather also prevailed on the **Plains**, accompanied by a warming trend that gradually melted winter wheat's protective snow cover across the northern half of the region. On the **northern High Plains**,

(Continued on page 5)

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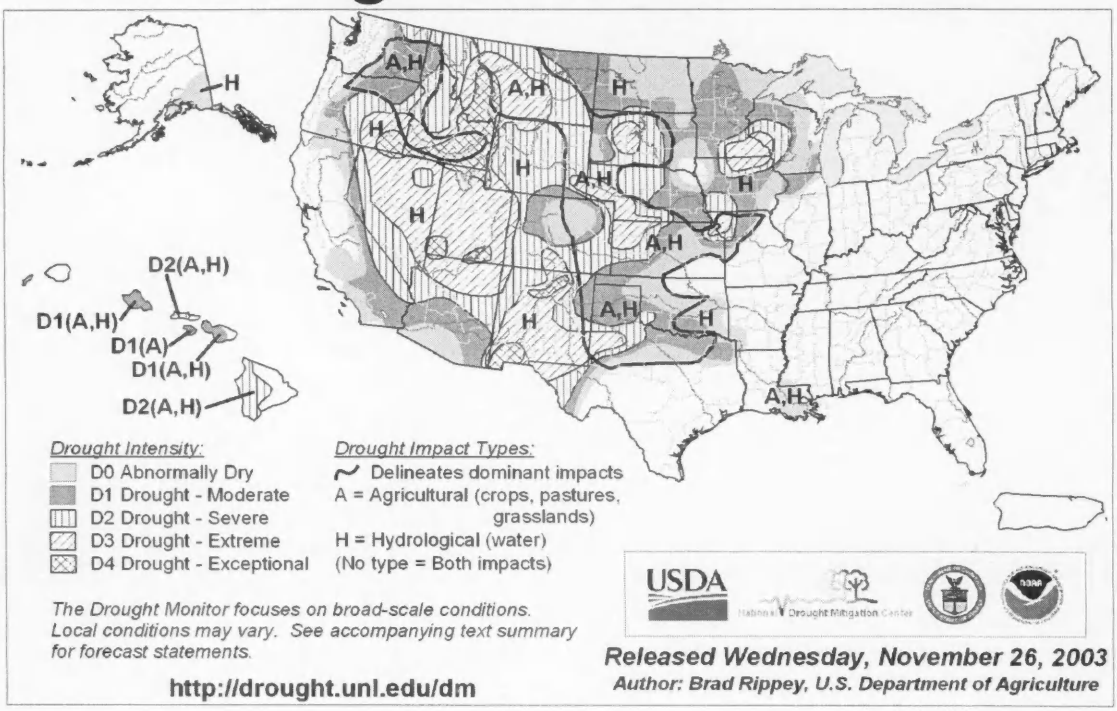
U.S. Drought Monitor

November 25, 2003
Valid 8 a.m. EDT



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

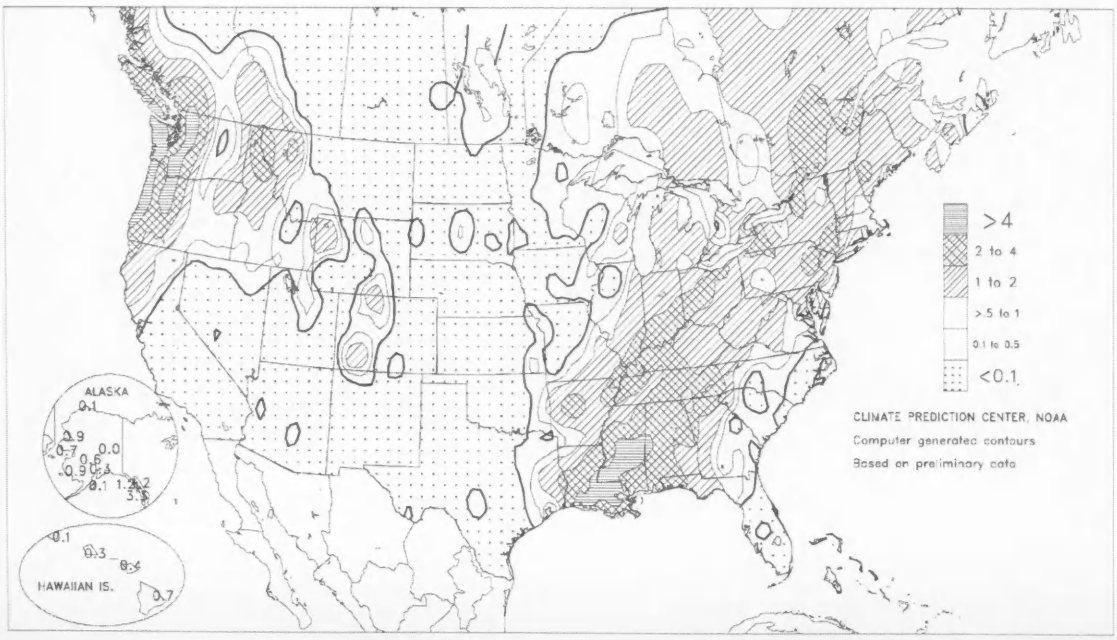
http://drought.unl.edu/dm

Released Wednesday, November 26, 2003

Author: Brad Rippey, U.S. Department of Agriculture

Total Precipitation (Inches)

NOV 23 - 29, 2003



Weather Data for Mississippi and the Missouri Bootheel

Weather Data for the Week Ending November 29, 2003

Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	INDIANOLA 1S	58	37	76	30	47	-	1.79	-	0.91	11.20	-	41.38	-	-	-	0	3	3	2
	INVERNESS 5E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	LYON	56	35	74	28	46	-	1.08	-	0.62	10.14	-	44.50	-	56	50	0	3	3	1
	MACON	60	38	76	29	49	-	2.29	-	1.83	10.08	-	53.78	-	59	51	0	3	4	1
	ONWARD	60	36	79	27	48	-	3.63	-	1.73	-	-	-	-	61	55	0	3	3	3
	PERTHSHIRE	56	36	74	28	46	-	1.10	-	0.58	11.72	-	44.72	-	56	49	0	3	3	1
	SCOTT	57	37	74	30	47	-	1.76	-	0.78	-	-	-	-	57	51	0	3	3	2
	SIDON	59	38	78	30	49	-	2.28	-	1.34	9.67	-	38.43	-	60	49	0	2	3	2
	STARKVILLE	59	36	77	27	48	-3	2.84	1.66	2.09	11.14	98	55.14	110	59	51	0	3	4	1
	TUNICA 1W	55	34	72	25	44	-	0.89	-	0.62	-	-	-	-	55	48	0	3	3	1
	VANCE	55	35	73	28	45	-	0.87	-	0.68	-	-	-	-	-	-	0	4	3	1
	VERONA	57	36	76	27	46	-	2.66	-	1.87	12.99	-	52.26	-	57	47	0	3	4	2
	STONEVILLE [X]	62	38	77	30	50	0	1.52	0.20	0.94	12.67	110	41.88	88	61	49	0	3	3	2
MO	DELTA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	STEELE	52	34	70	29	44	-2	3.47	1.81	2.70	13.71	117	49.63	109	51	44	0	4	3	2
	GLENNONVILLE	51	33	68	27	43	-3	1.55	0.23	0.78	9.13	89	33.93	85	51	44	0	4	2	2
	PORTAGEVILLE LF	52	33	69	27	44	-2	3.51	1.87	2.64	12.75	110	46.31	107	53	43	0	4	2	2
	CLARKTON	51	32	69	26	42	-3	1.72	0.40	1.13	10.89	106	40.99	102	51	47	0	4	2	2
	CARDWELL	52	33	70	26	43	-3	3.58	1.81	2.76	12.47	99	49.89	110	53	46	0	3	4	2
	CHARLESTON	51	31	70	24	42	-3	1.80	0.29	1.01	11.48	108	42.35	96	50	43	0	4	3	2
	PORTAGEVILLE DC	51	34	69	28	44	-2	2.74	1.10	1.97	12.38	107	43.55	100	53	45	0	4	3	2

Compiled by USDA/OCE/WAOB's Stoneville Field Office.
[X] Based on 1971-2000 normals.
- Sufficient data not available.

Weather and Crop Summary: The week started and ended on a very cold note, along with gusty north winds. Most locations in the Missouri Bootheel reported at least 4 days with minimum temperatures at or below 32°F. Between cold outbreaks, heavy rainfall (as much as 3.5 inches) accompanied warm weather at midweek. The precipitation boosted soil moisture and aided winter wheat and pastures, but standing water was observed in some areas. Recent rain events changed the Delta's "abnormally dry" status (on the Drought Monitor) to "wet," according to the Crop Moisture Index.

Selected November-Record Precipitation Totals

Record-High November Precipitation (Inches)

Location	Total	Normal	Previous Record/Year
Charleston, WV	9.12	3.66	8.81 in 1921
Grand Rapids, MI	7.90	3.35	7.81 in 1966
Huntington, WV	7.78	3.32	7.40 in 1900 and 1985
Bristol, TN	6.74	3.08	5.90 in 1948
Beckley, WV	6.70	2.88	6.33 in 1985
Lansing, MI	5.62	2.66	5.40 in 1990

Wettest November (Inches) Since...

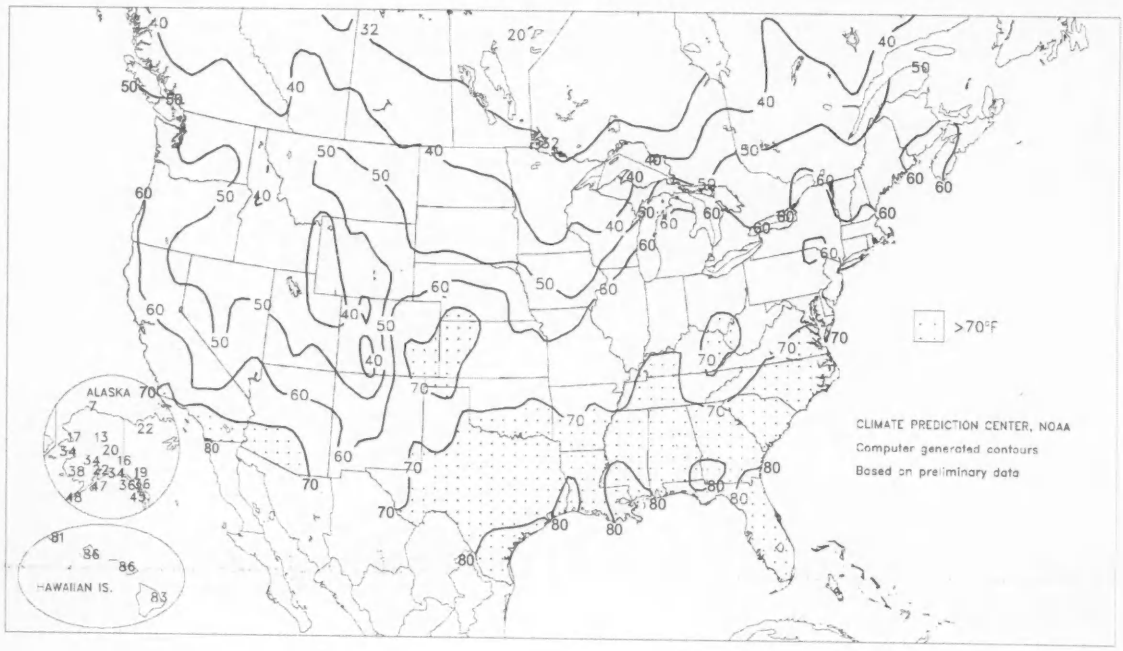
Location	Total	Normal	Wettest November Since...
Madison, WI	7.49	2.31	7.86 in 1934
Parkersburg, WV	5.93	3.25	6.46 in 1986

Driest November (Inches) Since...

Location	Total	Normal	Driest November Since...
Denver, CO	0.05	0.98	Trace in 1949
Wichita, KS	0.12	1.82	0.08 in 1995
San Antonio, TX	0.32	2.58	0.05 in 1999

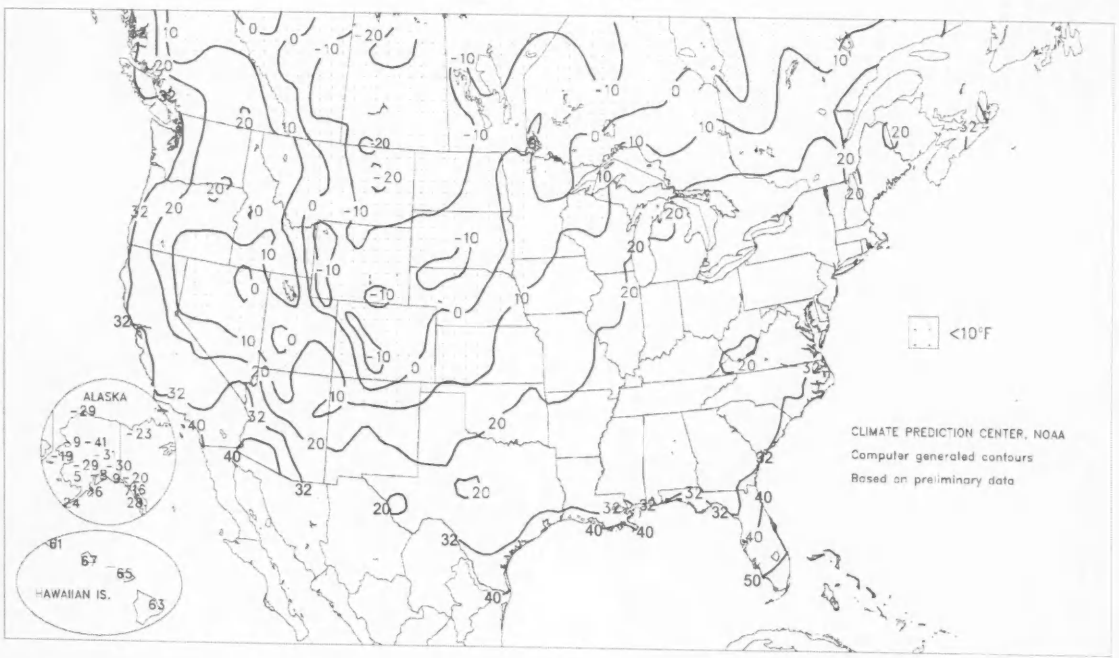
Extreme Maximum Temperature (°F)

NOV 23 - 29, 2003



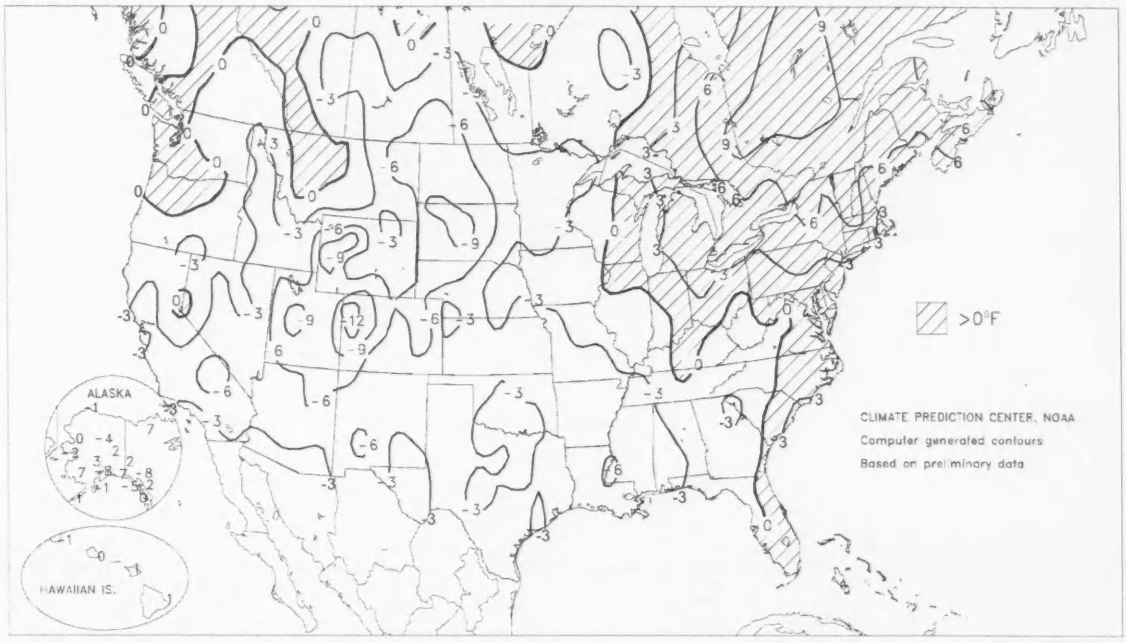
Extreme Minimum Temperature (°F)

NOV 23 - 29, 2003



Departure of Average Temperature from Normal (°F)

NOV 23 - 29, 2003



(Continued from front cover)

temperatures rebounded from early-week readings as low as -20°F to 50°F or higher by week's end. Meanwhile on the **southern High Plains**, dry weather favored final cotton, peanut, and sorghum harvesting but continued to hinder wheat establishment. Farther east, widespread showers benefited winter grains and cool-season pastures in the **lower Mississippi Valley**, although frosts and freezes on November 24-25 and 29-30 slowed winter crop growth throughout the **South**. In the **southern Atlantic region**, mostly dry weather promoted late-autumn fieldwork. In contrast, rain, snow, and wet field conditions hampered final corn harvesting in the **eastern Corn Belt**, while soil moisture for winter wheat remained adequate to locally excessive from the **Ohio Valley to the lower Great Lakes region**. Weekly temperatures up to 8°F above normal in the **Northeast** contrasted with readings as much as 10°F below normal on the **Plains**, despite the late-week warming trend in the latter region.

Early in the week, chilly conditions prevailed from the **Midwest and Plains westward**, resulting in more than 50 daily-record lows. In **Colorado**, records on November 23 included -6°F in **Pueblo** and 4°F in **Grand Junction**. Meanwhile in **California**, daily-record lows dipped to 32°F in **Santa Barbara** and 33°F in **Salinas**. Elsewhere in **California**, **Cuyama** noted consecutive daily-record lows of 20°F on November 23-24. Farther east, daily-record lows on November 24 included -13°F in **Valentine, NE**, -10°F in **Mobridge, SD**, and 11°F in **Amarillo, TX.** Days later, however, mild weather returned to the **Plains**, **Midwest**, and **West**. On November 28, highs reached daily-record levels in **Walla Walla, WA** (61°F), and **Eugene, OR** (60°F). A day later, record highs on the **central High Plains** reached 75°F in **Goodland, KS**, 74°F in **Pueblo, CO**, and 73°F in **McCook, NE.** Farther east, scattered daily-record highs were confined to the **Northeast** during the approach of two strong cold fronts. On November 24, **Massena, NY**, notched a daily-record high of 69°F. Five days later in **Maine**, highs of 60°F in **Houlton** and **Bangor** were records for November 29.

Early-week rain and snow lingered across the **Midwest** in the wake of a cold front's passage. In **Wisconsin**, **Madison's** daily-record total of 1.70 inches on November 23 helped to elevate its monthly sum to 7.49 inches (324 percent of normal). Elsewhere, a daily-record snowfall of 2.5 inches in **Huron, SD**, boosted its November 22-23 total to 8.0 inches. Farther east, two additional rounds of locally heavy rain contributed to the wettest November on record in locations such as **Charleston, WV** (9.12 inches, or 249 percent of normal), **Grand Rapids, MI** (7.90 inches, or 236 percent), and **Bristol, TN** (6.74 inches, or 219 percent). High winds trailed the second cold front across **East**, resulting in a November 29 gust to 58 m.p.h. in **Worcester, MA**. Meanwhile in the **West**, locally heavy snowfall fell from November 25-27 as far south as **Utah's Wasatch Range**, where **Alta** netted 29.5 inches. Elsewhere, heavy precipitation accompanied the late-week warmth in the **Pacific Northwest**. Daily-record rainfall totals in **western Washington** for November 28 included 6.03 inches in **Quillayute**, 2.97 inches in **Hoquiam**, and 2.57 inches at **Stampede Pass**. In contrast, November precipitation totaled less than one-tenth of an inch on parts of the **Plains**, including **Denver, CO** (0.05 inch, or 5 percent of normal), and **Dodge City, KS** (0.03 inch, or 3 percent).

Tranquil weather prevailed in **Hawaii** until late in the week, when torrential rains erupted on **Oahu** and in scattered locations elsewhere on the islands. On November 29-30, 24-hour totals on **Oahu** reached 13.20 inches in **Luluku** and 12.75 inches at the **Wilson Tunnel**. Elsewhere, 24-hour amounts included 3.56 inches in **Kamalo, Molokai**, and 3.84 inches on the **Big Island** at **Mountain View**. Farther north, snowy, unsettled weather accompanied highly variable temperatures in **Alaska**. November snowfall totaled more than twice the normal values at locations such as **Anchorage** (28.8 inches), **Fairbanks** (27.6 inches), and **Juneau** (24.9 inches). In **western Alaska**, **Kotzebue** netted 44.0 inches during November, easily its snowiest month during the last half-century (previously, 24.3 inches in November 1993).

National Weather Data for Selected Cities

Weather Data for the Week Ending November 29, 2003

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	HUNTSVILLE	60	35	73	25	47	-1	2.43	1.11	1.44	12.91	101	52.58	102	86	58	0	4	3	2
	MOBILE	68	41	81	30	55	-1	2.65	1.34	2.57	8.30	57	67.70	110	85	46	0	2	4	1
	MONTGOMERY	64	38	77	29	51	-2	1.56	0.33	0.79	9.28	84	46.86	95	96	44	0	2	3	2
AK	ANCHORAGE	18	5	22	-8	12	-7	0.27	0.05	0.18	6.66	112	13.64	91	85	72	0	7	2	0
	BARROW	2	-14	7	-29	-6	-1	0.07	0.04	0.04	3.06	255	5.64	141	83	73	0	7	3	0
	FAIRBANKS	9	-9	20	-31	0	2	0.00	-0.14	0.00	1.92	73	11.51	121	85	78	0	7	0	0
	JUNEAU	33	25	36	16	29	-2	1.20	0.04	0.80	21.98	104	48.19	91	94	87	0	7	7	1
	KODIAK	39	25	47	16	32	0	0.06	-1.46	0.05	22.19	98	75.17	111	63	48	0	6	2	0
	NOME	22	2	34	-19	12	-2	0.71	0.44	0.38	5.17	98	16.54	107	86	76	0	7	4	0
AZ	FLAGSTAFF	44	16	63	8	30	-3	0.00	-0.41	0.00	5.28	92	16.99	81	67	19	0	7	0	0
	PHOENIX	68	46	74	40	57	-1	0.00	-0.17	0.00	1.19	54	6.74	92	35	15	0	0	0	0
	TUCSON	66	41	74	30	54	-1	0.00	-0.14	0.00	3.60	110	9.93	90	41	20	0	2	0	0
	YUMA	69	49	73	43	59	-2	0.00	-0.03	0.00	0.39	66	3.56	141	36	21	0	0	0	0
AR	FORT SMITH	56	30	73	22	43	-4	1.05	-0.04	0.53	8.16	87	26.41	66	90	40	0	5	2	2
	LITTLE ROCK	57	34	70	24	45	-3	1.54	0.19	1.05	9.93	74	35.71	78	86	42	0	3	3	1
CA	BAKERSFIELD	63	38	72	33	50	-1	0.00	-0.14	0.00	0.62	63	4.17	74	61	41	0	0	0	0
	FRESNO	60	35	65	31	48	-1	0.00	-0.25	0.00	0.42	22	6.24	64	78	48	0	2	0	0
	LOS ANGELES	69	48	76	43	59	-1	0.00	-0.30	0.00	1.50	91	9.57	85	61	38	0	0	0	0
	REDDING	55	36	59	29	46	-2	0.91	-0.03	0.87	5.94	91	24.61	86	86	62	0	2	2	1
	SACRAMENTO	57	38	59	29	47	-3	0.01	-0.51	0.01	1.54	47	10.37	68	95	49	0	3	1	0
	SAN DIEGO	68	50	77	46	59	-1	0.00	-0.24	0.00	0.48	29	8.48	91	66	39	0	0	0	0
	SAN FRANCISCO	57	45	59	41	51	-1	0.00	-0.60	0.00	1.41	39	11.58	68	81	63	0	0	0	0
	STOCKTON	58	33	61	26	45	-4	0.00	-0.41	0.00	1.41	50	6.27	53	95	76	0	4	0	0
CO	ALAMOSA	37	6	46	-2	21	-3	0.00	-0.08	0.00	2.25	114	6.21	91	68	32	0	7	0	0
	CO SPRINGS	44	12	66	-1	28	-4	0.00	-0.06	0.00	0.69	27	12.31	73	72	17	0	7	0	0
	DENVER INTL	45	15	68	-3	30	-3	0.00	-0.09	0.00	0.38	16	13.79	104	72	26	0	6	0	0
	GRAND JUNCTION	32	11	39	4	22	-12	0.00	-0.11	0.00	2.20	87	6.03	72	80	61	0	7	0	0
	PUEBLO	48	9	74	-6	28	-6	0.00	-0.08	0.00	0.57	29	11.51	96	71	34	0	7	0	0
CT	BRIDGEPORT	53	37	63	30	45	3	0.38	-0.43	0.22	10.10	95	43.47	107	84	61	0	2	3	0
	HARTFORD	54	31	63	26	42	4	0.93	0.04	0.71	19.47	163	51.25	121	88	58	0	5	4	1
DC	WASHINGTON	56	38	66	33	47	2	1.15	0.46	0.83	15.05	152	55.10	152	82	54	0	0	2	1
DE	WILMINGTON	52	35	61	28	44	2	0.93	0.16	0.76	15.26	151	50.60	129	93	61	0	2	4	1
FL	DAYTONA BEACH	77	55	84	42	66	2	0.10	-0.52	0.09	16.86	121	55.78	120	93	49	0	0	2	0
	JACKSONVILLE	73	48	81	31	60	1	0.10	-0.45	0.08	6.86	49	43.48	88	96	50	0	1	3	0
	KEY WEST	82	72	85	62	77	2	0.05	-0.43	0.05	11.24	91	37.12	101	84	61	0	0	1	0
	MIAMI	81	66	84	55	73	0	0.00	-0.61	0.00	23.91	134	68.53	122	86	56	0	0	0	0
	ORLANDO	77	57	84	43	67	1	0.00	-0.55	0.00	8.18	77	49.32	107	93	54	0	0	0	0
	PENSACOLA	67	44	79	33	56	-2	0.75	-0.23	0.46	7.50	53	59.92	100	80	51	0	0	3	0
	TALLAHASSEE	68	41	79	29	55	-3	1.26	0.37	1.10	11.83	99	63.46	108	94	59	0	1	2	1
	TAMPA	76	57	81	34	66	-1	0.00	-0.47	0.00	5.35	52	50.83	120	88	55	0	0	0	0
	WEST PALM	80	63	85	50	72	1	0.15	-1.01	0.15	14.03	74	61.62	106	85	56	0	0	1	0
GA	ATHENS	60	35	72	26	47	-3	0.69	-0.14	0.37	7.80	74	48.12	109	87	59	0	2	3	0
	ATLANTA	59	36	71	27	48	-2	1.27	0.30	0.95	8.08	73	50.32	109	91	66	0	3	3	1
	AUGUSTA	66	34	75	26	50	-1	0.26	-0.30	0.21	5.44	58	51.04	124	96	54	0	3	2	0
	COLUMBUS	65	39	77	30	52	-2	1.69	0.67	1.20	8.12	89	53.69	122	92	40	0	2	3	1
	MACON	67	35	79	28	51	-1	0.38	-0.42	0.22	5.82	67	53.37	131	94	45	0	2	5	0
	SAVANNAH	71	44	79	31	57	1	0.45	-0.05	0.38	8.31	79	44.82	96	97	57	0	1	2	0
HI	HILO	82	67	83	63	74	1	0.69	-2.85	0.24	27.13	80	78.71	68	89	78	0	0	5	0
	HONOLULU	83	70	86	67	77	0	0.28	-0.25	0.24	1.89	38	7.81	51	81	69	0	0	2	0
	KAHULUI	84	68	86	65	76	1	0.43	-0.12	0.22	1.13	33	10.23	66	86	77	0	0	4	0
	LIHUE	80	67	81	61	74	-1	0.13	-0.94	0.05	7.41	65	29.05	84	90	82	0	0	4	0
ID	BOISE	43	27	49	19	35	0	0.29	-0.04	0.25	1.01	36	8.73	82	76	56	0	6	4	0
	LEWISTON	47	33	53	25	40	3	0.33	0.07	0.32	1.84	64	12.29	106	67	53	0	3	2	0
	POCATELLO	36	19	45	14	28	-2	0.02	-0.23	0.02	1.12	39	6.30	55	81	60	0	7	1	0
IL	CHICAGO/O'HARE	43	28	65	20	36	1	0.59	-0.08	0.58	8.07	91	30.12	89	77	60	0	6	2	1
	MOLINE	45	24	64	18	34	0	0.23	-0.36	0.22	7.45	87	29.07	81	82	57	0	7	2	0
	PEORIA	44	26	63	17	35	0	0.26	-0.44	0.26	6.76	78	29.61	88	85	54	0	6	1	0
	ROCKFORD	42	24	60	19	33	1	0.14	-0.45	0.12	6.91	81	22.46	65	83	70	0	7	3	0
	SPRINGFIELD	45	27	64	20	36	-2	0.51	-0.15	0.50	9.47	116	33.71	103	83	63	0	6	2	1
IN	EVANSVILLE	50	33	70	27	42	0	2.21	1.20	1.10	9.27	95	39.26	97	79	61	0	4	4	2
	FORT WAYNE	46	31	64	24	39	3	1.02	0.33	0.38	9.88	120	41.88	125	93	72	0	5	5	0
	INDIANAPOLIS	47	32	67	24	39	0	1.86	1.02	0.67	16.73	184	50.09	133	89	64	0	4	5	1
	SOUTH BEND	46	30	65	23	38	2	1.17	0.37	1.08	10.57	103	33.04	91	83	69	0	4	5	1
IA	BURLINGTON	45	23	63	15	34	-1	0.20	-0.41	0.20	8.34	92	29.80	83	90	49	0	7	1	0
	CEDAR RAPIDS	40	19	47	11	30	-2	0.66	0.18	0.66	10.15	134	29.44	93	91	50	0	7	1	1
	DES MOINES	40	20	51	13	30	-3	0.29	-0.11	0.29	9.23	119	32.77	98	86	58	0	7	1	0
	DUBUQUE	40	21	54	15	30	-1	1.18	0.65	1.17	11.03	131	27.17	81	87	65	0	7	2	1
	SIOUX CITY	39	14	53	6	26	-4	0.00	-0.24	0.00	6.53	114	25.75	102	82	63	0	7	0	0
	WATERLOO	38	16	47	12	27	-3	0.07	-0.32	0.07	6.59	89	25.92	81	85	57	0	7	1	0
KS	CONCORDIA	45	22	60	11	33	-3	0.01	-0.26	0.01	7.84	138	23.79	87	70	45	0	7	1	0
	DODGE CITY	49	19	66	10	34	-4	0.00	-0.18	0.00	5.46	134	23.44	109	63	25	0	7	0	0
	GOODLAND	47	15	75	5	31	-2	0.00	-0.12	0.00	0.50	17	13.23	69	68	40	0	7	0	0
	TOPEKA	47	23	64	18	35	-3	0.08	-0.38	0.08	4.11	46	27.14	80	77	48	0	7	1	0
	WICHITA	48	24	65	12	36	-4	0.00	-0.37	0.00	7.70	108	31.72	110	68	40	0	7	0	0

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending November 29, 2003

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
KY	JACKSON	54	33	73	24	44	0	1.33	0.28	0.57	12.11	111	51.42	115	88	48	0	4	4	1
	LEXINGTON	51	33	67	22	42	0	1.04	0.15	0.59	12.18	134	49.02	118	85	66	0	5	3	1
	LOUISVILLE	54	37	71	27	45	1	1.63	0.70	0.99	12.70	134	45.81	113	81	50	0	4	4	2
	PADUCAH	51	32	70	23	41	-2	2.82	1.66	1.51	12.52	111	45.86	103	89	55	0	4	4	2
LA	BATON ROUGE	66	40	83	27	53	-3	3.59	2.43	2.65	11.63	88	40.65	71	97	47	0	3	4	2
	LAKE CHARLES	68	41	81	30	55	-2	1.73	0.64	1.49	14.85	104	40.53	77	94	47	0	2	3	1
	NEW ORLEANS	67	48	82	37	57	-2	5.53	4.23	5.14	15.96	119	64.39	109	76	54	0	0	4	1
	SHREVEPORT	63	35	79	25	49	-4	0.54	-0.53	0.28	7.74	64	33.12	71	88	39	0	4	3	0
ME	CARIBOU	41	25	58	21	33	7	1.45	0.73	0.70	12.00	130	36.42	107	95	64	0	7	4	2
	PORTLAND	50	30	57	25	40	5	1.02	-0.02	0.71	14.36	117	33.93	82	92	58	0	5	3	1
MD	BALTIMORE	54	35	68	29	45	3	1.08	0.34	0.89	18.16	180	58.00	151	84	57	0	2	2	1
MA	BOSTON	52	37	63	32	44	2	0.70	-0.19	0.44	11.48	104	39.41	102	87	58	0	1	3	0
	WORCESTER	51	33	62	27	42	6	0.52	-0.39	0.36	11.90	91	44.85	100	87	45	0	3	3	0
MI	ALPENA	44	27	63	20	36	5	0.26	-0.18	0.18	6.79	96	23.03	87	91	65	0	6	4	0
	GRAND RAPIDS	43	31	64	24	37	3	1.01	0.21	0.85	11.20	109	31.37	92	89	68	0	5	4	1
	HOUGHTON LAKE	42	27	60	19	35	4	0.82	0.37	0.60	8.93	121	23.49	89	90	76	0	6	4	1
	LANSING	45	31	64	24	38	4	0.70	0.07	0.48	9.51	115	23.98	82	86	68	0	5	3	0
	MUSKEGON	45	32	64	23	39	4	0.98	0.25	0.62	11.52	123	26.48	88	87	73	0	3	4	1
	TRAVERSE CITY	42	29	61	19	35	2	0.67	0.08	0.51	9.62	106	25.53	83	94	66	0	6	4	1
MN	DULUTH	26	12	35	2	19	-4	0.06	-0.35	0.06	6.04	70	23.76	79	89	76	0	7	1	0
	INT'L FALLS	24	7	31	-7	15	-3	0.08	-0.16	0.04	3.58	57	16.17	70	92	72	0	7	4	0
	MINNEAPOLIS	31	16	37	9	23	-4	0.26	-0.09	0.22	3.55	53	22.15	78	83	66	0	7	2	0
	ROCHESTER	32	16	40	9	24	-2	0.10	-0.29	0.09	3.31	46	22.40	74	89	73	0	7	2	0
	ST. CLOUD	29	9	37	-1	19	-4	0.08	-0.16	0.08	5.25	79	23.87	91	93	67	0	7	1	0
MS	JACKSON	61	34	79	25	48	-4	3.53	2.29	2.59	11.29	99	55.56	110	92	48	0	4	4	2
	MERIDIAN	62	37	77	25	49	-4	3.86	2.62	3.30	12.77	110	67.76	128	95	51	0	4	4	1
	TUPELO	56	35	75	26	46	-2	2.59	1.26	1.65	14.48	126	65.59	133	85	53	0	3	4	2
MO	COLUMBIA	49	25	67	17	37	-2	0.32	-0.46	0.32	12.02	121	36.20	96	84	50	0	6	1	0
	KANSAS CITY	44	24	57	17	34	-4	0.26	-0.24	0.26	5.14	51	25.78	71	83	50	0	7	1	0
	SAINT LOUIS	50	31	69	24	41	0	0.58	-0.29	0.58	12.30	133	43.71	122	73	53	0	5	1	1
	SPRINGFIELD	49	25	67	18	37	-5	0.65	-0.41	0.65	10.83	86	38.53	93	85	60	0	6	1	1
MT	BILLINGS	40	23	57	6	31	1	0.00	-0.14	0.00	1.85	57	9.02	64	59	36	0	6	0	0
	BUTTE	34	9	45	-1	21	-2	0.03	-0.08	0.03	0.52	22	9.42	77	81	45	0	7	1	0
	GLASGOW	30	9	46	-8	20	-2	0.04	-0.02	0.04	1.42	71	9.60	89	85	72	0	6	1	0
	GREAT FALLS	39	19	51	3	29	1	0.00	-0.11	0.00	1.59	59	10.12	72	70	45	0	6	0	0
	HAVRE	38	14	52	-14	26	1	0.00	-0.08	0.00	1.82	91	9.57	88	80	71	0	6	0	0
	KALISPELL	33	16	45	4	25	-3	0.66	0.30	0.27	4.21	121	11.15	72	91	78	0	6	5	0
	MISSOULA	33	18	46	14	26	-2	0.22	0.00	0.17	2.63	95	13.00	103	96	82	0	7	3	0
NE	GRAND ISLAND	44	18	67	6	31	0	0.01	-0.26	0.01	2.97	57	16.40	65	75	43	0	7	1	0
	LINCOLN	44	17	57	11	31	-2	0.03	-0.27	0.03	7.39	117	25.57	93	74	48	0	7	1	0
	NORFOLK	40	17	57	2	28	-2	0.00	-0.27	0.00	6.21	117	21.95	85	81	54	0	7	0	0
	NORTH PLATTE	44	8	67	-3	26	-4	0.00	-0.11	0.00	2.36	73	18.33	96	87	33	0	7	0	0
	OMAHA	41	19	54	11	30	-3	0.08	-0.28	0.08	5.78	81	22.54	77	80	58	0	7	1	0
	SCOTTSBLUFF	39	10	61	1	25	-5	0.13	-0.03	0.12	1.94	66	9.33	59	80	56	0	7	2	0
	VALENTINE	36	7	55	-13	21	-8	0.00	-0.12	0.00	1.32	38	15.23	80	84	57	0	7	0	0
NV	ELY	43	12	57	2	27	-3	0.01	-0.08	0.01	1.08	43	7.48	80	74	46	0	7	1	0
	LAS VEGAS	55	37	62	33	46	-5	0.00	-0.06	0.00	1.13	145	5.92	148	45	27	0	0	0	0
	RENO	50	26	57	16	38	1	0.00	-0.19	0.00	0.16	10	3.36	52	68	50	0	5	0	0
	WINNEMUCCA	44	17	47	2	31	-3	0.00	-0.17	0.00	0.94	50	6.50	88	75	49	0	6	0	0
NH	CONCORD	52	27	62	21	40	7	0.66	-0.11	0.48	11.37	113	39.03	113	92	48	0	5	3	0
NJ	NEWARK	53	38	64	34	46	3	0.83	-0.08	0.70	13.25	122	51.26	121	83	60	0	0	3	1
NM	ALBUQUERQUE	45	26	54	21	35	-5	0.00	-0.09	0.00	2.36	90	6.26	70	42	18	0	6	0	0
NY	ALBANY	51	32	61	27	41	6	1.24	0.54	0.78	13.15	137	40.78	116	91	59	0	4	5	1
	BINGHAMTON	46	30	58	23	38	4	1.00	0.20	0.60	14.82	152	40.77	115	86	70	0	5	4	1
	BUFFALO	49	33	70	28	41	5	1.53	0.59	0.76	11.41	106	33.33	91	85	58	0	5	5	1
	ROCHESTER	49	32	68	27	41	5	1.80	1.13	1.01	8.85	101	29.26	94	89	59	0	5	5	1
	SYRACUSE	52	33	65	29	42	6	0.95	0.05	0.39	10.58	97	34.54	94	85	54	0	5	4	0
NC	ASHEVILLE	55	29	70	23	42	-2	0.45	-0.40	0.28	9.34	89	56.87	131	90	59	0	6	3	0
	CHARLOTTE	60	34	72	28	47	-2	0.13	-0.58	0.09	4.95	46	60.27	150	91	48	0	3	2	0
	GREENSBORO	59	34	72	27	46	0	0.40	-0.29	0.37	11.29	109	58.52	147	89	51	0	3	3	0
	HATTERAS	64	50	73	42	57	2	0.42	-0.58	0.37	17.83	113	67.12	127	90	69	0	0	3	0
	RALEIGH	64	37	76	31	51	3	0.42	-0.25	0.42	8.44	82	44.95	113	91	49	0	2	1	0
	WILMINGTON	68	44	78	33	56	2	0.06	-0.77	0.04	17.35	133	58.83	111	95	55	0	0	3	0
ND	BISMARCK	28	4	46	-9	16	-7	0.07	-0.04	0.05	2.55	72	13.02	80	82	70	0	7	3	0
	DICKINSON	29	6	46	-11	18	-6	0.01	-0.07	0.01	3.16	91	12.98	81	88	64	0	7	1	0
	FARGO	26	10	42	1	18	-3	0.01	-0.14	0.01	2.81	55	16.86	82	86	68	0	7	1	0
	GRAND FORKS	24	7	38	2	15	-5	0.03	-0.12	0.03	3.17	69	16.46	87	91	67	0	7	1	0
	JAMESTOWN	26	5	45	-5	16	-5	0.01	-0.09	0.01	1.57	42	13.96	78	89	67	0	7	1	0
	WILLISTON	26	-1	40	-17	13	-7	0.10	-0.04	0.09	2.07	74	14.08	104	89	76	0	7	2	0
OH	AKRON-CANTON	47	31	66	22	39	2	1.58	0.84	0.96	13.21	150	48.19	136	87	69	0	5	4	1
	CINCINNATI	50	33	67	22	42	1	1.64	0.85	0.79	10.92	120	42.36	108	87	64	0	5	3	2
	CLEVELAND	49	35	66	26	42	4	2.19	1.36	1.38	12.48	129	38.51	109	85	59	0	4	4	2
	COLUMBUS	48	33	68	23	41	1	1.29	0.52	0.69	11.55	140	46.36	131	87	67	0	5	4	1
	DAYTON	48	33	66	22	41	3	2.06	1.29	0.93	12.35	145	41.19	113	87	63	0	4	4	2
	MANSFIELD	47	32	66	22	39	3	1.74	0.85	0.89	12.00	124	38.33	96	90	60	0	5	4	2
	TOLEDO	48	33	65	26	41	5	0.96	0.30	0.40	10.07	129	34.13	112	91	71	0	5	4	0

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STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	YOUNGSTOWN	47	32	66	23	40	3	1.01	0.24	0.66	11.63	126	43.34	124	82	61	0	6	4	1
OK	OKLAHOMA CITY	55	28	69	20	42	-3	0.02	-0.42	0.01	4.25	44	20.18	60	73	25	0	6	2	0
	TULSA	56	31	72	22	43	-2	0.25	-0.51	0.25	10.17	84	38.48	97	70	41	0	5	1	0
OR	ASTORIA	51	39	59	34	45	0	3.68	1.07	1.81	18.00	98	58.53	104	88	76	0	0	7	2
	BURNS	40	17	47	7	29	0	0.52	0.24	0.50	1.72	77	8.12	88	88	70	0	6	2	1
	EUGENE	49	36	60	26	43	1	2.54	0.39	1.14	8.61	66	30.72	73	94	85	0	2	6	2
	MEDFORD	49	32	61	22	41	0	0.88	0.14	0.56	3.41	70	15.36	100	98	70	0	5	5	1
	PENDLETON	50	34	61	29	42	4	0.58	0.20	0.45	2.03	65	9.94	89	79	65	0	4	5	0
	PORTLAND	50	41	54	35	45	2	1.54	0.12	0.56	7.97	81	30.57	98	94	78	0	0	6	1
	SALEM	50	38	59	31	44	1	2.11	0.48	0.84	8.50	81	31.45	95	95	81	0	1	6	2
PA	ALLENTOWN	52	33	63	26	42	4	1.42	0.56	1.12	19.64	175	52.21	126	91	62	0	3	3	1
	ERIE	50	36	68	28	43	4	1.52	0.58	0.96	13.07	105	37.98	98	75	55	0	3	4	1
	MIDDLETOWN	52	34	60	29	43	2	0.98	0.13	0.67	13.85	142	51.38	139	91	58	0	3	3	1
	PHILADELPHIA	55	38	66	32	46	2	0.69	-0.08	0.55	11.42	119	42.25	110	81	68	0	1	2	1
	PITTSBURGH	50	30	67	23	40	1	0.72	-0.02	0.44	10.19	122	38.46	110	94	61	0	5	4	0
	WILKES-BARRE	50	33	60	27	41	3	1.13	0.41	0.66	17.13	174	46.04	132	90	61	0	4	3	1
	WILLIAMSPORT	49	33	59	28	41	4	1.02	0.18	0.62	16.62	157	48.68	127	89	65	0	4	3	1
RI	PROVIDENCE	55	34	63	26	44	4	0.42	-0.58	0.19	10.66	92	43.88	104	83	54	0	3	3	0
SC	BEAUFORT	69	45	77	31	57	2	0.24	-0.32	0.20	9.08	84	46.07	99	94	51	0	1	2	0
	CHARLESTON	71	45	79	32	58	3	0.24	-0.39	0.24	9.01	78	49.14	102	94	51	0	1	1	0
	COLUMBIA	66	38	74	28	52	0	0.18	-0.45	0.16	9.27	97	52.95	118	92	56	0	1	2	0
	GREENVILLE	57	34	71	28	46	-2	0.66	-0.19	0.30	7.53	66	60.63	131	93	51	0	3	3	0
SD	ABERDEEN	27	6	45	-9	17	-7	0.12	0.03	0.05	2.60	63	20.72	105	84	75	0	7	3	0
	HURON	30	9	43	-7	20	-6	0.01	-0.12	0.01	3.18	76	15.98	78	87	67	0	7	1	0
	RAPID CITY	35	10	54	-3	22	-7	0.00	-0.06	0.00	2.35	78	10.86	67	75	52	0	7	0	0
	SIOUX FALLS	34	14	47	0	24	-2	0.49	0.27	0.49	6.48	112	21.22	88	80	65	0	7	1	0
TN	BRISTOL	55	29	68	22	42	0	0.66	-0.13	0.38	13.58	164	62.49	165	94	51	0	5	4	0
	CHATTANOOGA	58	36	71	29	47	0	1.39	0.19	0.86	12.58	103	58.87	119	85	54	0	4	3	1
	KNOXVILLE	55	32	70	26	44	-2	1.00	-0.02	0.43	11.21	118	55.39	127	91	57	0	5	3	0
	MEMPHIS	55	34	71	26	45	-4	1.39	-0.12	0.83	11.64	96	48.99	101	76	49	0	3	4	2
	NASHVILLE	55	36	73	24	45	-1	1.54	0.41	0.67	14.73	138	53.49	123	83	46	0	4	4	1
TX	ABILENE	61	32	76	19	46	-4	0.00	-0.22	0.00	5.36	76	19.09	85	51	30	0	5	0	0
	AMARILLO	52	23	69	11	38	-3	0.00	-0.08	0.00	3.21	80	13.34	70	63	19	0	7	0	0
	AUSTIN	67	34	75	23	50	-6	0.03	-0.49	0.02	4.14	44	19.80	64	72	36	0	4	2	0
	BEAUMONT	67	41	81	32	54	-4	0.22	-0.91	0.22	22.24	145	55.75	102	94	45	0	1	1	0
	BROWNSVILLE	75	50	85	41	62	-3	0.01	-0.31	0.01	22.62	210	33.60	128	79	57	0	0	1	0
	CORPUS CHRISTI	74	45	89	34	59	-3	0.00	-0.33	0.00	15.09	142	27.98	92	84	54	0	0	0	0
	DEL RIO	66	37	71	28	51	-5	0.00	-0.17	0.00	8.24	167	23.98	138	72	32	0	2	0	0
	EL PASO	57	32	66	21	45	-4	0.00	-0.12	0.00	0.91	33	4.20	49	42	17	0	4	0	0
	FORT WORTH	62	37	76	29	49	-2	0.21	-0.29	0.20	7.95	89	23.64	74	80	31	0	1	2	0
	GALVESTON	68	50	78	42	59	-3	0.03	-0.84	0.03	12.86	101	33.25	83	82	44	0	0	1	0
	HOUSTON	69	42	79	34	55	-3	0.24	-0.66	0.13	19.69	153	44.28	101	87	53	0	0	2	0
	LUBBOCK	58	26	67	18	42	-2	0.00	-0.14	0.00	1.36	28	8.79	49	54	26	0	5	0	0
	MIDLAND	60	31	72	21	45	-4	0.00	-0.11	0.00	1.82	39	10.63	76	46	27	0	5	0	0
	SAN ANGELO	62	31	77	18	46	-4	0.00	-0.19	0.00	7.29	112	19.19	97	54	28	0	5	0	0
	SAN ANTONIO	67	38	77	29	53	-4	0.00	-0.48	0.00	11.50	123	28.36	92	73	26	0	2	0	0
	VICTORIA	70	41	81	31	56	-3	0.02	-0.53	0.02	16.63	141	37.01	99	93	51	0	1	1	0
	WACO	64	37	76	28	51	-2	0.10	-0.49	0.09	9.54	106	27.64	91	77	44	0	3	2	0
	WICHITA FALLS	62	31	75	22	47	-1	0.00	-0.33	0.00	3.77	48	18.93	70	62	30	0	4	0	0
UT	SALT LAKE CITY	36	21	44	15	29	-6	0.42	0.13	0.42	3.74	89	12.25	81	85	55	0	7	1	0
VT	BURLINGTON	50	31	59	26	41	8	1.29	0.64	0.63	13.20	134	31.42	93	92	53	0	5	5	1
VA	LYNCHBURG	56	32	68	25	44	1	0.47	-0.27	0.25	13.18	128	55.83	140	83	53	0	3	3	0
	NORFOLK	64	42	78	35	53	3	0.21	-0.43	0.14	15.98	154	55.62	131	85	52	0	0	4	0
	RICHMOND	60	36	72	29	48	2	0.48	-0.19	0.46	15.94	152	57.84	142	93	58	0	2	2	0
	ROANOKE	55	32	68	28	44	0	0.53	-0.20	0.35	9.75	97	51.24	130	85	59	0	4	3	0
	WASH/DULLES	54	33	65	28	44	2	0.93	0.19	0.66	17.17	166	60.14	156	89	60	0	3	2	1
WA	OLYMPIA	48	36	50	31	42	2	3.45	1.44	1.59	20.53	147	46.75	110	93	76	0	1	7	2
	QUILLAYUTE	48	37	52	34	43	1	8.59	5.02	6.19	33.11	117	81.30	94	97	85	0	0	7	3
	SEATTLE-TACOMA	47	39	50	36	43	0	1.83	0.38	0.95	16.69	159	37.70	121	89	81	0	0	6	1
	SPOKANE	35	19	46	9	27	-4	0.56	-0.02	0.17	2.93	75	12.54	88	97	82	0	6	5	0
	YAKIMA	45	20	53	11	33	0	0.00	-0.28	0.00	0.36	19	5.09	75	86	72	0	7	0	0
WV	BECKLEY	51	29	67	21	40	0	0.85	0.15	0.56	15.71	183	49.48	129	80	57	0	5	3	1
	CHARLESTON	55	30	72	24	42	-1	1.15	0.27	0.82	15.84	165	57.64	142	95	50	0	5	4	1
	ELKINS	54	26	69	23	40	2	1.16	0.33	0.76	13.78	139	48.41	114	95	43	0	7	4	1
	HUNTINGTON	53	32	71	23	42	-1	0.71	-0.08	0.59	12.71	146	53.76	139	92	54	0	5	3	1
WI	EAU CLAIRE	32	18	39	10	25	-1	0.30	-0.07	0.28	4.87	63	22.70	73	91	63	0	7	3	0
	GREEN BAY	39	25	53	17	32	3	1.56	1.09	1.54	8.96	120	30.10	109	91	71	0	7	2	1
	LA CROSSE	38	22	45	15	30	0	0.08	-0.35	0.08	5.39	71	22.25	72	84	48	0	7	1	0
	MADISON	40	24	57	17	32	1	1.72	1.22	1.70	13.38	180	29.85	96	80	63	0	7	3	1
	MILWAUKEE	42	27	63	20	34	0	0.15	-0.46	0.14	7.05	84	20.26	62	82	62	0	6	2	0
WY	CASPER	35	14	51	-5	25	-3	0.02	-0.14	0.02	2.29	81	12.73	103	67	47	0	6	1	0
	CHEYENNE	36	17	55	1	27	-3	0.06	-0.08	0.05	1.72	63	10.13	68	58	41	0	6	2	0
	LANDER	35	11	52	2	23	-3	0.00	-0.18	0.00	2.03	60	9.63	76	64	50	0	7	0	0
	SHERIDAN	40	11	55	-5	25	-2	0.00	-0.14	0.00	2.41	69	12.05	86	69	53	0	7	0	0

Based on 1971-2000 normals

*** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

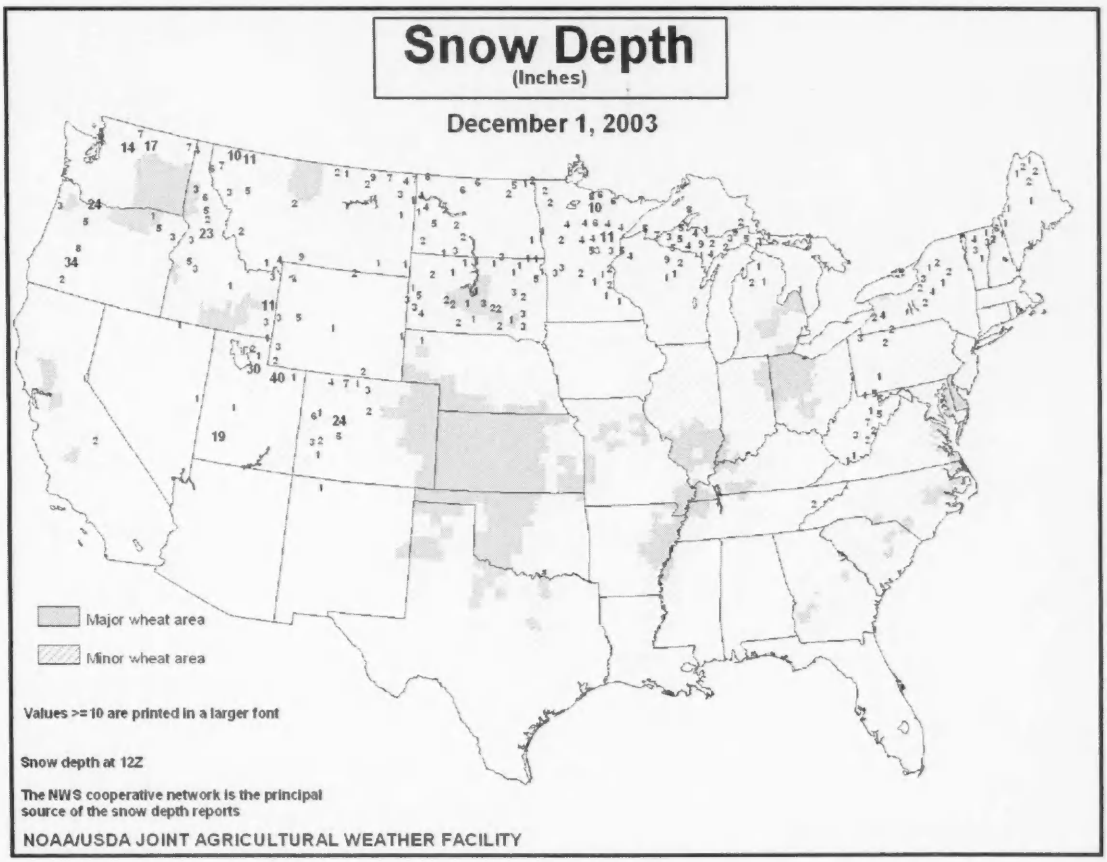
National Agricultural Summary

November 24 - 30, 2003

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Temperatures were below normal for most of the Nation, falling below zero degrees Fahrenheit across most of the northern Great Plains and northern and central Rocky Mountains. Temperatures in the Gulf Coast States fell below freezing for the first time this season, but not for long enough to damage crops. Meanwhile, the Atlantic Coast and eastern and central Corn Belt had above-normal temperatures. Precipitation was heavy in the Mississippi Delta, causing some fieldwork delays. Moderate precipitation fell across the eastern and central Corn Belt. The southern Atlantic Coast States were mostly dry, but the rest of the Southeast had moderate rainfall. The western Corn Belt, Great Plains, and Southwest remained dry, prompting concern over winter wheat condition. Scattered, light to moderate precipitation fell in the northern and central Rocky Mountains. However, snow cover continued to decrease in the region, leaving the winter wheat crop more exposed to cold temperatures.


Snow Depth
(Inches)
December 1, 2003
Major wheat area
Minor wheat area
Values >= 10 are printed in a larger font
Snow depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

November 23 - 29, 2003

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Widespread rain continued to favor winter crop establishment across western Europe, while in central and eastern Europe, unseasonably warm, dry weather allowed late-season fieldwork and favored early crop development.

FSU-WESTERN: Unseasonably mild weather favored winter grains that continued easing into dormancy in Ukraine and the Southern Region in Russia.

MIDDLE EAST: Dry weather aided cotton harvesting in western Turkey, while rain favored winter grain germination across Syria and western Iran.

NORTHWESTERN AFRICA: Widespread rain covered the winter grain areas of Morocco, Algeria, and Tunisia, slowing winter grain planting but favoring germination.

SOUTH AFRICA: Warm, showery weather continued across the corn belt, promoting summer crop planting.

EASTERN ASIA: Seasonably drier weather dominated China but untimely showers persisted over Japan, hampering late season fieldwork.

SOUTHEAST ASIA: Showers continued to slow coffee harvesting in central Vietnam, while benefiting vegetative crops in the Philippines and Indonesia.

AUSTRALIA: Following last week's rainfall, drier weather overspread much of the continent, favoring winter wheat and barley harvesting, but slowing development of vegetative cotton and sorghum.

SOUTH AMERICA: Showers developed in drought-stricken sections of western Argentina at week's end.

November 2003

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE PREDICTION CENTER-NCEP-NWS-NOAA
**** DATA NOT AVAILABLE*

COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	3	0	11	-6	1	1.9	105	17
SWEDEN	UPPSALA	4	1	10	-5	3	1.5	9	-43
FINLAN	HELSINKI	4	2	8	-6	3	2.5	44	-27
UKINGD	ABERDEEN	10	5	17	-6	7	1.7	72	-11
	MANCHESTER	11	6	15	-4	8	1.4	56	-26
	CARDIFF	12	8	16	2	10	1.0	71	-36
	LONDON	13	7	18	0	10	2.0	108	58
IRELAN	DUBLIN	11	6	16	-1	8	0.8	56	-8
ICELAN	REYKJAVIK	4	1	12	-5	3	1.4	47	-35
DENMAR	COPENHAGEN	8	5	12	-2	6	1.5	23	-22
LUXEMB	LUXEMBOURG	9	5	15	-3	7	2.7	48	-30
SWITZE	ZURICH	9	3	13	-1	6	1.7	86	-3
	GENEVA	9	3	13	-1	6	1.1	81	-4
FRANCE	PARIS/ORLY	12	6	19	1	9	1.4	31	-18
	STRASBOURG	11	4	16	-1	7	2.0	45	-3
	BOURGES	12	5	19	-1	9	2.0	56	-6
	BORDEAUX	15	8	19	1	12	2.5	65	-40
	TOULOUSE	15	7	20	0	11	2.5	47	-3
	MARSEILLE	17	9	20	2	13	2.3	67	17
SPAIN	VALLADOLID	13	6	18	0	9	1.3	73	25
	MADRID	14	6	18	-1	10	0.0	52	1
	SEVILLE	20	12	24	6	16	0.6	69	-28
PORTUG	LISBON	17	12	22	10	15	1.0	114	13
GERMAN	HAMBURG	10	5	14	-2	7	2.3	54	-15
	BERLIN	9	4	15	-4	7	2.1	38	-5
	DUSSELDORF	12	6	16	0	9	2.3	36	-26
	LEIPZIG	9	4	14	-3	7	2.2	29	-7
	DRESDEN	9	4	13	-2	7	2.2	31	-12
	STUTTGART	10	3	15	-2	6	2.0	43	-3
	NURNBERG	9	3	14	-3	6	1.9	22	-23
	AUGSBURG	8	1	14	-3	4	0.9	39	-13
AUSTRI	VIENNA	9	4	18	-4	7	2.2	30	-16
	INNSBRUCK	11	1	16	-4	6	3.1	31	-36
CZECHR	PRAGUE	8	1	14	-6	5	1.9	8	-21
POLAND	WARSAW	7	3	14	-3	5	2.2	23	-13
	LODZ	8	3	16	-4	6	3.0	25	-16
	KATOWICE	9	2	18	-8	6	2.4	19	-30
HUNGAR	BUDAPEST	11	4	19	-3	7	2.9	37	-11
YUGOSL	BELGRADE	13	6	25	-1	10	3.3	29	-25
ROMANI	BUCHAREST	11	3	22	-5	7	2.5	71	32
BULGAR	SOFIA	12	3	22	-4	7	2.5	73	30
ITALY	MILAN	12	7	19	2	10	2.7	119	43
	VERONA	13	7	19	0	10	3.2	99	34
	VENICE	14	7	20	1	11	2.8	46	-24
	GENOA	15	11	21	7	13	0.2	270	168
	ROME	18	10	22	3	14	1.5	24	-72
	NAPLES	19	11	24	5	15	2.1	44	-96
GREECE	THESSALONIKA	16	10	22	5	13	2.0	24	-35
	LARISSA	16	9	24	3	12	2.0	10	-62
	ATHENS	18	13	24	9	16	0.9	66	-2
TURKEY	ISTANBUL	14	9	27	2	11	-0.1	66	-15
	ANKARA	13	-1	23	-7	6	1.5	7	-33
CYPRUS	LARNACA	23	13	29	8	18	1.1	4	-50
ESTONI	TALLINN	5	2	10	-4	3	2.4	43	-25
RUSSIA	ST.PETERSBURG	4	1	8	-5	3	2.5	56	2
LITHUA	KAUNAS	5	3	10	-4	4	2.0	35	-13
BELARU	MINSK	4	1	12	-6	3	2.4	24	-25
RUSSIA	KAZAN	0	-3	5	-12	-1	2.4	31	-16
	MOSCOW	3	0	8	-4	1	2.9	57	-1
	YEKATERINBURG	-4	-8	3	-19	-6	-0.1	12	-17
	OMSK	-7	-13	4	-25	-10	-2.3	36	7
KAZAKH	KUSTANAY	-3	-11	6	-23	-7	-0.6	11	-12
RUSSIA	BARNAUL	-6	-12	3	-25	-9	-2.0	33	4
	KHABAROVSK	-5	-12	4	-22	-9	-0.9	38	15
	VLADIVOSTOK	2	-3	10	-15	-1	0.3	17	-9
UKRAIN	KIEV	5	2	13	-4	4	2.0	26	-22
	LVOV	9	2	15	-6	5	3.3	38	-6
	KIROVOGRAD	5	2	12	-3	4	2.4	17	-18
	ODESSA	9	5	17	-1	7	1.6	24	-18
	YALTA	12	8	19	4	10	0.9	30	-32

Based on Preliminary Reports

November 2003

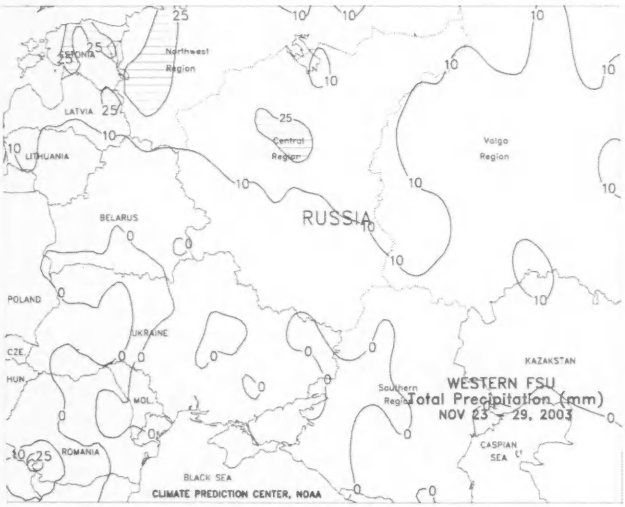
COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	PRECIPITATION (MM) TOTAL	DPART F/NRM
RUSSIA	SARATOV	1	-1	5	-6	0	2.4	48	10
UKRAIN	KHARKOV	4	1	8	-2	2	1.7	32	-11
RUSSIA	VOLGOGRAD	3	0	7	-5	1	1.8	36	5
	ASTRAKHAN	5	1	10	-4	3	0.4	44	27
	KRASNODAR	9	3	18	-2	6	0.3	26	-47
	ORENBURG	0	-5	5	-21	-2	1.3	31	-5
KAZAKH	TSELINOGRAD	-3	-10	8	-27	-7	0.0	30	4
	KARAGANDA	-3	-10	10	-26	-7	-1.4	45	17
GEORGI	TBILISI	13	6	18	-2	9	1.1	19	-15
UZBEKI	TASHKENT	13	6	28	-2	9	1.1	110	62
TURKME	ASHKHABAD	16	5	29	-2	11	0.8	14	-6
SYRIA	DAMASCUS	21	6	30	-1	13	1.5	56	33
ISRAEL	JERUSALEM	20	14	30	10	17	2.7	22	-49
PAKIST	KARACHI	32	18	37	13	25	0.9	0	***
INDIA	AMRITSAR	26	6	30	1	16	-1.9	25	18
	NEW DELHI	28	12	34	6	20	-0.6	0	-8
	AHMEDABAD	34	18	37	13	26	1.4	0	-10
	INDORE	32	16	34	13	24	1.8	0	-15
	CALCUTTA	30	18	33	13	24	0.0	0	-37
	VERAVAL	34	21	38	17	28	1.2	0	-26
	BOMBAY	35	22	37	19	28	1.1	0	-6
	POONA	32	15	34	10	24	1.2	2	-25
	BEGAMPET	30	17	31	12	23	-0.1	0	-29
	VISHAKHAPATNAM	30	23	32	20	27	0.4	0	-102
	MADRAS	31	23	33	20	27	0.7	84	-271
	MANGALORE	34	23	35	20	28	0.5	38	-28
HONGKO	HONG KONG INT	26	20	34	13	23	1.3	36	1
N KORE	PYONGYANG	10	3	20	-6	7	2.0	61	21
S KORE	SEOUL	13	7	21	-3	10	2.5	71	8
JAPAN	SAPPORO	9	3	22	-4	6	1.6	68	-35
	NAGOYA	19	12	25	3	15	3.0	194	115
	TOKYO	17	12	25	7	15	1.6	232	140
	YOKOHAMA	17	12	24	8	14	1.3	283	184
	KYOTO	18	12	25	4	15	2.4	195	132
	OSAKA	19	13	26	6	16	2.5	175	111
THAILA	PHITSANULOK	34	22	35	18	28	1.4	0	-33
	BANGKOK	35	26	36	23	30	2.5	0	-49
MALAYS	KUALA LUMPUR	33	24	35	23	29	1.9	472	183
VIETNA	HANOI	28	21	32	16	25	2.4	0	-45
CHINA	HARBIN	-1	-9	17	-22	-5	0.2	17	8
	HAMI	6	-5	14	-13	0	0.2	1	-1
	LANCHOW	9	-1	20	-6	4	1.6	7	4
	BEIJING	7	0	16	-7	4	-1.0	43	36
	TIENTSIN	8	2	20	-4	5	-1.1	22	12
	LHASA	14	-2	17	-5	6	2.6	0	-1
	KUNMING	19	9	22	5	14	1.9	6	-36
	CHENGCHOW	12	5	28	-3	8	0.2	35	13
	YEHCHANG	16	9	30	4	12	-0.3	52	6
	HANKOW	16	9	30	3	13	0.6	80	31
	CHUNGKING	17	13	30	9	15	0.6	56	7
	CHIHKIANG	17	9	29	3	13	0.3	28	-26
	WU HU	16	8	30	1	12	0.4	66	8
	SHANGHAI	17	11	28	4	14	0.9	41	-13
	NANCHANG	18	11	31	4	15	1.1	72	16
	TAIPEI	24	21	32	15	23	1.0	58	-15
	CANTON	25	17	33	10	21	1.3	31	-4
	NANNING	26	15	32	6	20	1.0	3	-38
CANARY	LAS PALMAS	23	18	26	15	20	-0.3	9	-8
MOROCC	CASABLANCA	***	***	24	10	***	***	***	***
	MARRAKECH	22	11	29	7	16	0.1	57	33
ALGERI	ALGER	22	11	27	7	16	1.5	60	-22
	BATNA	17	6	22	0	12	0.9	14	-3
TUNISI	TUNIS	22	14	26	11	18	2.1	20	-44
NIGER	NIAMEY	38	22	40	18	30	1.7	0	-1
MALI	TIMBUKTU	36	21	41	15	28	2.8	0	-1
	BAMAKO	34	19	37	14	27	-0.8	8	3
MAURIT	NOUAKCHOTT	33	20	39	17	27	0.9	0	-3
SENEGA	DAKAR	30	24	40	22	27	1.3	0	-3
CHAGOS	DIEGO GARCIA	30	25	33	23	28	0.3	576	335
LIBYA	TRIPOLI	25	15	35	9	20	2.5	22	-27
	BENGHAZI	24	16	33	11	20	2.0	7	-35
EGYPT	CAIRO	25	16	35	13	21	1.3	6	0
	ASWAN	31	17	40	13	24	2.3	0	0
ETHIOP	ADDIS ABABA	***	***	22	7	***	***	***	***
KENYA	NAIROBI	25	15	27	14	20	0.6	108	-6

COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	PRECIPITATION (MM) TOTAL	DPART F/NRM
TANZAN	DAR ES SALAAM	33	23	35	21	28	1.7	86	-29
GABON	LIBREVILLE	29	24	31	22	27	1.0	747	224
TOGO	LOME	32	25	34	23	29	1.5	24	2
BURKIN	OUAGADOUGOU	36	22	38	18	29	0.8	0	-3
COTE D	ABIDJAN	33	25	34	24	29	1.4	37	-94
MOZAMB	MAPUTO	29	***	35	18	***	***	14	-60
ZAMBIA	LUSAKA	30	19	33	14	25	0.0	49	-43
ZIMBAB	KADOMA	32	18	37	16	25	-0.4	52	-35
S AFRI	PRETORIA	29	18	35	14	23	2.3	69	-43
	JOHANNESBURG	25	14	30	9	19	1.2	44	-73
	BETHAL	26	13	33	10	19	1.5	130	-9
	DURBAN	25	18	30	14	22	0.2	70	-41
	CAPE TOWN	25	14	34	9	19	1.0	6	-12
CANADA	TORONTO	8	1	17	-6	5	1.6	143	74
	MONTREAL	7	-1	18	-9	3	1.3	134	43
	WINNIPEG	-3	-12	6	-21	-7	-2.0	16	-6
	REGINA	-6	-17	3	-25	-12	-6.5	12	-1
	SASKATOON	-4	-16	5	-26	-10	-3.6	9	-5
	LETHBRIDGE	1	-11	10	-30	-6	-4.3	20	4
	CALGARY	0	-12	10	-26	-6	-2.9	13	1
	EDMONTON	-2	-12	8	-25	-7	-3.1	6	-8
	VANCOUVER	8	1	13	-4	5	-1.5	168	-12
MEXICO	GUADALAJARA	26	12	29	6	19	1.5	25	12
	TLAXCALA	21	9	28	4	15	0.3	26	8
	ORIZABA	22	15	31	8	18	1.0	53	-23
BERMUD	ST GEORGES	25	20	28	17	23	0.8	69	-22
BAHAMA	NASSAU	28	23	30	15	25	1.0	24	-44
CUBA	HAVANA	29	20	31	14	24	0.4	70	-16
JAMAIC	KINGSTON	32	25	33	24	29	1.1	85	-5
P RICO	SAN JUAN	30	24	32	22	27	0.1	293	136
GUADEL	RAIZET	30	23	32	20	27	0.4	381	185
MARTIN	LAMENTIN	31	24	33	22	27	1.3	226	25
BARBAD	BRIDGETOWN	31	25	32	22	28	0.8	199	67
TRINID	PORT OF SPAIN	32	24	34	23	28	1.7	196	-2
COLOMB	BOGOTA	19	9	21	3	14	0.2	116	28
VENEZU	CARACAS	32	25	35	20	29	1.9	26	-31
F GUIA	CAYENNE	32	23	33	22	27	1.1	113	-40
BRAZIL	FORTALEZA	31	26	31	23	28	-0.1	28	3
	RECIFE	30	26	33	25	28	-0.3	25	-3
	CAMPO GRANDE	33	23	39	17	28	2.0	177	26
	FRANCA	27	18	31	12	23	0.2	204	51
	RIO DE JANEIRO	30	23	37	17	26	1.2	282	183
	LONDRINA	31	18	37	12	24	1.5	98	-71
	SANTA MARIA	28	17	38	8	22	0.2	228	104
	TORRES	24	18	30	10	21	-2.0	61	-80
PERU	LIMA	22	17	24	15	20	0.5	0	-1
BOLIVI	LA PAZ	17	2	26	-1	9	-0.3	34	-20
CHILE	SANTIAGO	27	10	31	8	19	1.5	10	5
ARGENT	IGUAZU	30	17	37	13	24	-0.2	150	13
	FORMOSA	31	19	41	12	25	0.4	206	37
	CERES	30	15	38	7	23	0.6	99	-3
	CORDOBA	30	15	40	7	22	1.8	96	-14
	RIO CUARTO	30	15	38	7	22	2.7	19	-114
	ROSARIO	28	15	37	8	21	0.9	96	-14
	BUENOS AIRES	25	14	32	5	19	0.1	184	90
	SANTA ROSA	28	13	36	4	20	0.9	69	-27
	TRES ARROYOS	23	11	29	4	17	0.7	69	-16
MARSHA	MAJURO	30	27	32	25	29	1.2	223	-98
NEW CA	NOUMEA	27	21	30	19	24	-0.2	60	-10
FIJI	NAUSORI	28	21	31	17	25	-0.1	92	-152
SAMOA	PAGO PAGO	30	25	32	23	28	0.4	517	234
TAHITI	PAPEETE	30	24	32	22	27	0.7	129	-2
PNEWGU	PORT MORESBY	30	25	33	23	28	0.3	127	74
NZEALA	AUCKLAND	19	13	23	8	16	***	74	***
	WELLINGTON	17	11	20	6	14	***	70	***
AUSTRA	DARWIN	33	26	36	23	29	0.0	302	168
	BRISBANE	26	17	30	12	21	-1.1	67	-40
	PERTH	29	15	41	10	22	2.2	51	25
	CEDUNA	27	14	42	3	21	1.5	10	-10
	ADELAIDE	27	14	37	5	20	2.2	7	-14
	MELBOURNE	23	11	39	3	17	1.1	46	-3
	WAGGA	28	11	37	0	19	1.1	32	-9
	CANBERRA	24	8	33	1	16	0.4	68	2
INDONE	SERANG	32	25	34	23	28	0.5	95	-55
PHILIP	MANILA	31	26	33	24	29	0.7	132	-10

Based on Preliminary Reports

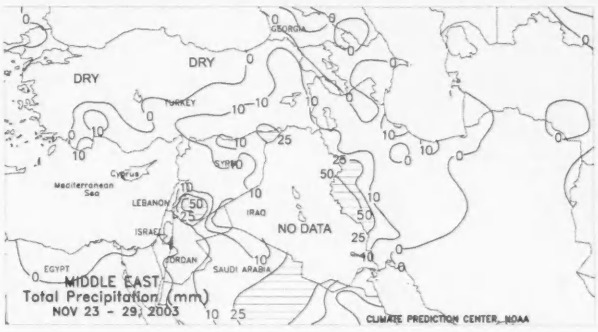
EUROPE

Across England, France, the Iberian Peninsula, and Italy, widespread rain (10-75 mm) boosted soil moisture for winter grain and oilseed establishment. Across these regions, winter grain crop conditions remained favorable. Lighter precipitation (less than 10 mm) fell across northern France, the Low Countries, Germany, and Poland. Light to moderate rain (10-25 mm) fell across the coastal regions of the Adriatic Sea of the Balkans. Dry weather was reported across the rest of eastern Europe. Unseasonably mild weather prevailed across most of continental Europe, with temperatures averaging 2 to 5 degrees C above normal across the west (France and Germany) and 5 to 8 degrees C above normal from Poland to the Balkans. Maximum temperatures exceeded 15 degrees C across most of France and eastern Europe. In areas that did not receive much rain (from Germany eastward), the mild weather reduced soil moisture for crop establishment. Also, the mild weather has extended the autumn growth of winter crops in Germany and Poland, where the crop typically is dormant by middle to late November. In England, the Iberian Peninsula, and the lower Danube River Valley, temperatures averaged near normal.



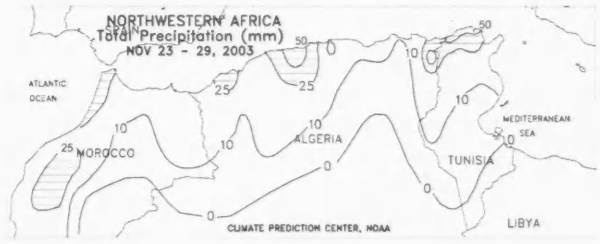
FSU-WESTERN

Unseasonably warm, dry weather prevailed throughout most of the region, helping late-season fieldwork and providing mostly favorable conditions for winter grains that continued to enter dormancy in southern areas. Significant precipitation (10-25 mm) was confined to Latvia, Estonia, and northernmost areas in Russia, falling as a mixture of rain and snow. Weekly temperatures averaged 3 to 7 degrees C above normal over most of the region. Temperatures remained above freezing across Lithuania and Belarus during the entire week. The warmest weather occurred early in the week, with maximum temperatures ranging from 10 to 15 degrees C in southern Belarus, western Ukraine, and portions of the Southern Region in Russia. During the latter half of the week, a strong area of high pressure centered over the Volga Region ushered in cooler weather to most areas. Most of the region, except for northern Russia, was snow-free at week's end.



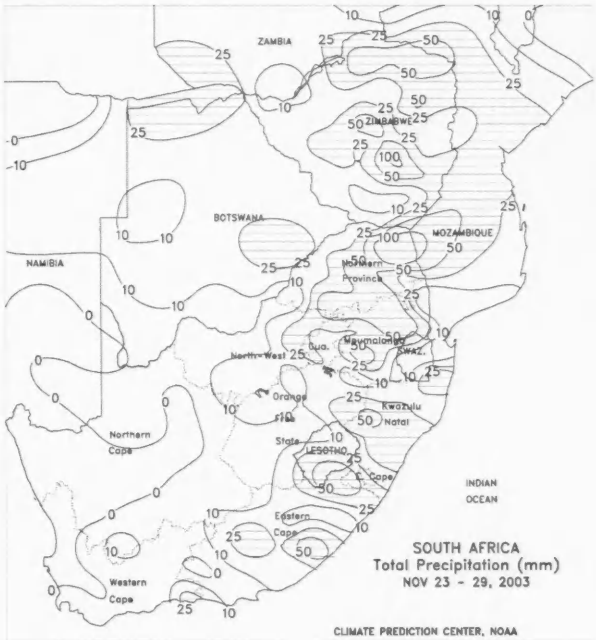
MIDDLE EAST

Dry weather prevailed across most of western and central Turkey, favoring western cotton harvesting. In the central Plateau, adequate soil moisture supplies still exist for winter grain establishment. Seasonably mild weather (temperatures 1-3 degrees C above normal, with minimum temperatures near freezing) favored late-season winter crop development. In Syria, eastern Turkey, and western Iran, light rain (3-10 mm) promoted rainfed winter grain germination and development. Station reports from surrounding countries suggested that light rain fell in northern Iraq. Temperatures averaged near normal across the eastern Mediterranean and western Iran.



NORTHWESTERN AFRICA

Widespread rain (5-30 mm) covered the major winter grain areas of Morocco, Algeria, and Tunisia, favoring winter grain planting and germination. Temperatures averaged near normal, aiding fieldwork.

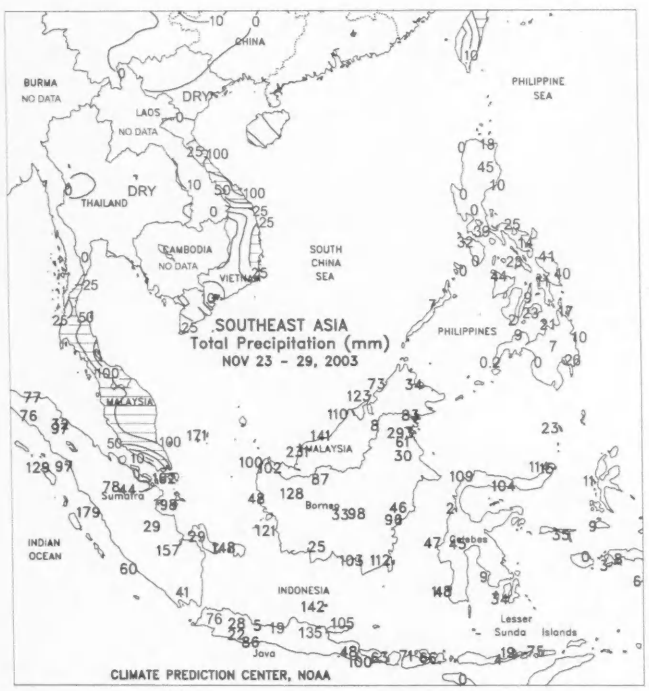


SOUTH AFRICA

Light to moderate showers (5-25 mm, locally exceeding 50 mm) swept across the corn belt, keeping topsoils moist for summer crop germination. Rainfall increased from southwest to northeast, with the heaviest showers (greater than 25 mm) falling in Mpumalanga and easternmost crop areas of North West and Free State. Moderate to heavy rain (10-50 mm) also continued in non-commercial crop areas of northern Province and Eastern Cape, as well as sugarcane areas of KwaZulu-Natal, with seasonably drier conditions in vegetable and fruit areas of Western Cape. However, temperatures averaged near to above normal in most major agricultural areas, maintaining higher-than-usual evapotranspiration rates.

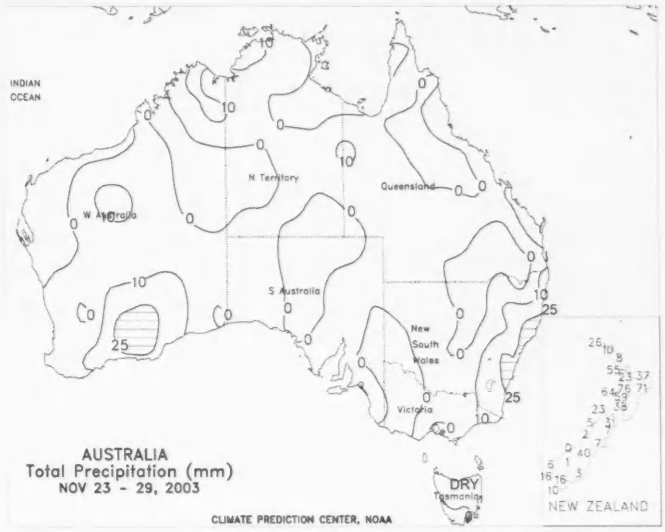
EASTERN ASIA

Dry weather dominated most Chinese crop areas, the exception being the Sichuan Basin and upper Yangtze River Valley, where moderate showers (greater than 10 mm) increased moisture for winter rapeseed germination. Dry, slightly warmer-than-normal weather supported seasonal fieldwork in sugarcane areas along the southern coast. On the North China Plain, temperatures averaging less than 5 degrees C helped to ease winter wheat into dormancy in northern growing areas. Temperatures stayed above freezing in the more southerly wheat areas, allowing late-season development. In Japan, rain (10-50 mm, locally exceeding 100 mm) disrupted late rice harvesting and other seasonal fieldwork.



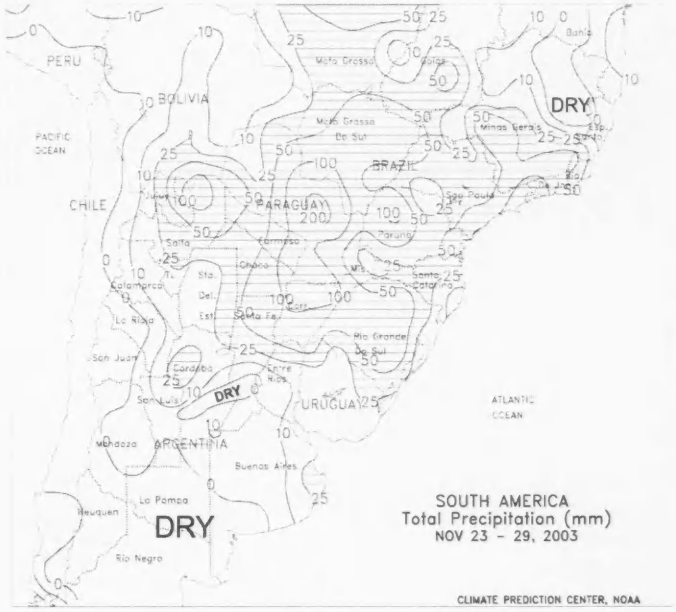
SOUTHEAST ASIA

Seasonably dry weather favored main-season rice harvesting in Vietnam, while showers (25-50 mm) in central Vietnam, continued to delay coffee harvesting. Light showers (10-25 mm) fell along the eastern Philippines, providing additional moisture to irrigated vegetative corn and tillering rice. In Java, Indonesia, showers (25-50 mm or more) slowed rice transplanting activities, but favored vegetative corn. Heavy showers (50-100 mm or more) fell throughout oil palm areas of peninsular Malaysia and Sumatra.



AUSTRALIA

In northern parts of Western Australia, mostly dry (less than 5 mm), seasonably warm weather favored winter wheat and barley harvesting, while widespread rain (8-20 mm) temporarily delayed fieldwork in southern sections of the state. Following last week's unseasonably warm and showery weather, mostly dry (less than 3 mm), seasonably warm weather overspread South Australia, Victoria, and southern New South Wales, enabling winter grain harvesting to resume. Farther north, widespread rain (10-45 mm) fell on coastal sections of northern New South Wales and Queensland, while much more isolated showers (locally 2-8 mm) fell on major winter grain and summer crop producing areas farther inland. The mostly dry weather allowed winter grain harvesting to gain speed following last week's rainfall, but the dryness continued to slow development of vegetative cotton and sorghum, suffering from the effects of prolonged drought. Temperatures in eastern Australia averaged 2 to 3 degrees C below normal, slowing crop development.



SOUTH AMERICA

At week's end, showers were developing in Cordoba, Argentina, providing timely topsoil moisture for summer crop germination. As of November 29, moderate rain (10-25 mm or greater) had fallen in northern Cordoba, with additional rain moving through important summer grain and oilseed areas of southern Cordoba and Buenos Aires on the 30th (additional information will appear in next week's Weekly Weather and Crop Bulletin). Elsewhere, moderate to heavy showers (25-50 mm, locally exceeding 100 mm) increased moisture reserves for cotton and other summer crops from northern Santa Fe and Corrientes northward through Formosa. According to the Buenos Aires Cereal Exchange, corn, sunflowers, and soybeans were 65, 73, and 46 percent planted, respectively, as of November 29. In Brazil, moderate to heavy showers (25-50 mm or more) continued in primary soybean areas of the south and center-west (Rio Grande do Sul northward through Mato Grosso), maintaining generally favorable prospects for summer crop germination and establishment. The rains also covered important coffee and citrus areas of Sao Paulo and southern Minas Gerais, increasing moisture for crop flowering and bean and fruit development. However, drier-than-normal weather continued in outlying crop areas of the northeastern interior (eastern Goias, northern Minas Gerais, and Bahia), where additional moisture is needed to ensure proper germination and establishment. According to independent analyst Safras e Mercado, soybeans were 80 percent planted as of November 28.

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